



PATENT

Case Docket No. NIH210.001C1

Date: March 8, 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Gottesman et al.
Appl. No. : 10/627,007
Filed : July 25, 2003
For : IDENTIFICATION OF NEW
SMALL RNAs AND ORFs OF
E. COLI AS MEDIATORS OF
CELL AND INTERCELL
REGULATION
Examiner : Unknown
Group Art Unit : Unknown

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

March 8, 2004

(Date)

Nancy W. Vensko, Reg. No. 36,298

TRANSMITTAL LETTER

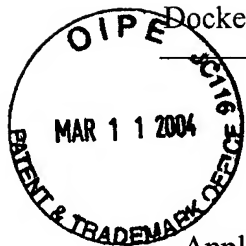
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed for filing in the above-identified application are:

- (X) An Information Disclosure Statement.
- (X) A PTO Form 1449 with forty-seven (47) references.
- (X) The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 11-1410.
- (X) Return prepaid postcard.

Nancy W. Vensko
Registration No. 36,298
Attorney of Record
Customer No. 20,995
(805) 547-5580



INFORMATION DISCLOSURE STATEMENT

Applicant : Gottesman et al.
App. No. : 10/627,007
Filed : July 25, 2003
For : IDENTIFICATION OF NEW SMALL
RNAs AND ORFs OF E. COLI AS
MEDIATORS OF CELL AND
INTERCELL REGULATION
Examiner : Unknown
Group Art Unit : Unknown

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed is form PTO-1449 listing 47 references that are also enclosed.

This Information Disclosure Statement is being filed before the receipt of a first Office Action on the merits, and presumably no fee is required in accordance with 37 C.F.R. § 1.97(b)(3). If a first Office Action on the merits was mailed before the mailing date of this Statement, the Commissioner is authorized to charge the fee set forth in 37 C.F.R. § 1.17(p) to Deposit Account No. 11-1410.

Respectfully submitted,
KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 3/8/05

By: 

Nancy W. Vensko
Registration No. 36,298
Attorney of Record
Customer No. 20,995
(805) 547-5580

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
NIH210.001C1APPLICATION NO.
10/627,007INFORMATION DISCLOSURE STATEMENT
BY APPLICANT

(USE SEVERAL SHEETS IF NECESSARY)

APPLICANT
Gottesman et al.FILING DATE
July 25, 2003GROUP
Unknown

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

EXAMINER
INITIAL

OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

	1.	Altschul, S.F. et al. 1990 "Basic local alignment search tool" <i>J. Mol. Biol.</i> 215: 403-410.
	2.	Altuvia S. et al. 1998 "The <i>Escherichia coli</i> OxyS regulatory RNA represses <i>fhlA</i> translation by blocking ribosome binding" <i>EMBO J.</i> 17(20):6069-75.
	3.	Altuvia, S. et al. 1997 "A small, stable RNA induced by oxidative stress: Role as a pleiotropic regulator and antimutator" <i>Cell</i> 90: 43-53.
	4.	Argaman, L et al. 2001 "Novel small RNA-encoding genes in the intergenic regions of <i>Escherichia coli</i> " <i>Curr Biol.</i> 11:941-50.
	5.	Bachelier, S. et al. 1996 "Repeated sequences" In: <i>Escherichia coli</i> and <i>Salmonella</i> : Cellular and molecular biology (ed. F.C. Neidhardt, et al.), pp. 2012-2040 American Society for Microbiology, Washington, D.C.
	6.	Barreiro, V. et al. 1992 "Attachment sites for bacteriophage P2 on the <i>Escherichia coli</i> chromosome: DNA sequences, localization on the physical map, and detection of a P2-like remnant in <i>E. coli</i> K-12 derivatives" <i>J. Bacteriol.</i> 174: 4086-4093.
	7.	Blattner, F.R et al. 1997 "The complete genome sequence of <i>Escherichia coli</i> K-12" <i>Science</i> 277: 1453-1474.
	8.	Blattner, F.R et al. 1997 " <i>Escherichia coli</i> K12 MG1655 section 122 of 400 of the complete genome" Database EMBL Online 29 January 1997, Database accession no. AE000232.
	9.	Blumenthal, T. et al. 1979 "RNA replication: Function and structure of Q β -replicase" <i>Annu. Rev. Biochem.</i> 48: 525-548.
	10.	Bouvier, J et al. 1992 "Cloning, characterization, and expression of the <i>dapE</i> gene of <i>Escherichia coli</i> " <i>J. Bacteriol.</i> 174: 5265-5271.
	11.	Brown, L. et al. 1996 "Efficient translation of the RpoS sigma factor in <i>Salmonella typhimurium</i> requires Host Factor I, an RNA-binding protein encoded by the <i>hfq</i> gene" <i>J. Bacteriol.</i> 178: 3763-3770.
	12.	Campbell, A.M. 1992 "Chromosomal insertion sites for phages and plasmids" <i>J. Bacteriol.</i> 174: 7495-7499.

EXAMINER

DATE CONSIDERED

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. NIH210.001C1	APPLICATION NO. 10/627,007
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)		APPLICANT Gottesman et al.	
		FILING DATE July 25, 2003	GROUP Unknown

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
13. ✓	Compan, I. et al. 1994 "Anaerobic activation of <i>arcA</i> transcription in <i>Escherichia coli</i> : Roles of Fnr and ArcA" <i>Mol. Microbiol.</i> 11: 955-964.
14. ✓	Delcher, A.L. et al. 1999 "Improved microbial gene identification with GLIMMER" <i>Nucleic Acids Res.</i> 27: 4636-4641.
15. ✓	Devereux, J. et al. 1984 "A comprehensive set of sequence analysis programs for the VAX" <i>Nucleic Acids Res.</i> 12: 387-395.
16. ✓	Eddy, S.R. 1999 "Noncoding RNA genes" <i>Curr. Opin. Genet. Dev.</i> 9: 695-699.
17. ✓	Franze de Fernandez, M. et al. 1968 "Factor fraction required for the synthesis of bacteriophage Q β RNA" <i>Nature</i> 219: 588-590.
18. ✓	Gelfand, M.S. 1999 "Recognition of regulatory sites by genome comparison" <i>Res. Microbiol.</i> 150: 755-771.
19. ✓	Ghisotti, D et al. 1992 "Genetic analysis of the immunity region of phage-plasmid P4" <i>Mol. Microbiol.</i> 6: 3405-3413.
20. ✓	Hajndorf, E. et al. 2000 "Host factor Hfq of <i>Escherichia coli</i> stimulates elongation of poly(A) tails by poly(A) polymerase I" <i>PNAS USA</i> 97: 1501-1505.
21. ✓	Karzai, A.W et al. 1999 "SmpB, a unique RNA-binding protein essential for the peptide-tagging activity of SsrA (tmRNA)" <i>EMBO J.</i> 18: 3793-3799.
22. ✓	Kirby, J.E et al. 1994 "Excision of a P4-like cryptic prophage leads to Alp protease expression in <i>Escherichia coli</i> " <i>J. Bacteriol.</i> 176: 2068-2081.
23. ✓	Lazazzera, B.A. 2000 "Quorum sensing and starvation: signals for entry into stationary phase" <i>Curr. Opin. Microbiol.</i> 3: 177-182.
24. ✓	Majdalani N. et al. 1998 "DsrA RNA regulates translation of RpoS message by an anti-antisense mechanism, independent of its action as an antisilencer of transcription" <i>PNAS USA</i> 95(21):12462-7.
25. ✓	Majdalani, N. et al. 2001 "Regulation of RpoS by a novel small RNA: the characterization of RprA" <i>Mol. Microbiol.</i> 39: 1382-1394.
26. ✓	McVeigh, A. et al. 2000 "IS1414, an <i>Escherichia coli</i> insertion sequence with a heat-stable enterotoxin gene embedded in a transposase-like gene" <i>Infect. Immun.</i> 68: 5710-5715.
27. ✓	Montzka, K.A. et al. 1988 "Additional low-abundance human small nuclear ribonucleoproteins: U11, U12, etc." <i>PNAS USA</i> 85: 8885-8889.
28. ✓	Muffler, A. et al. 1996 "The RNA-binding protein HF-I, known as a host factor for phage Q β RNA replication, is essential for <i>rpoS</i> translation in <i>Escherichia coli</i> " <i>Genes & Dev.</i> 10: 1143-1151.
29. ✓	Okamoto, K. et al. 1986 "Mechanism for the autogenous control of the <i>crp</i> operon: Transcriptional inhibition by a divergent RNA transcript" <i>PNAS USA</i> 83: 5000-5004.
30. ✓	Pepe, C.M. et al 1997 "Regulation of the <i>tetCD</i> genes of transposon <i>Tn10</i> " <i>J. Mol. Biol.</i> 270: 14-25.
31. ✓	Rudd, K.E. 1998 "Linkage map of <i>Escherichia coli</i> K-12, edition 10: The physical map" <i>Microbiol. Mol. Biol. Rev.</i> 62: 985-1019.
32. ✓	Rudd K.E. 1999 "Novel intergenic repeats of <i>Escherichia coli</i> K-12" <i>Res. Microbiol.</i> 150: 653-664.

EXAMINER	DATE CONSIDERED
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)	ATTY. DOCKET NO. NIH210.001C1	APPLICATION NO. 10/627,007
	APPLICANT Gottesman et al.	
	FILING DATE July 25, 2003	GROUP Unknown

EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)	
	33.	Seoane, A.S. et al. 1995 "Identification of new genes regulated by the <i>marRAB</i> operon in <i>Escherichia coli</i> " <i>J. Bacteriol.</i> 177: 530-535.
	34.	Sledjeski D. et al. 1995 "A small RNA acts as an antisilencer of the H-NS-silenced <i>rcaA</i> gene of <i>Escherichia coli</i> " <i>PNAS USA</i> 92(6):2003-7.
	35.	Sledjeski, D.D. et al. 1996 "The small RNA, DsrA, is essential for the low temperature expression of RpoS during exponential growth in <i>Escherichia coli</i> " <i>EMBO J.</i> 15: 3993-4000.
	36.	Sledjeski, D.D. et al. 2001 "Hfq is necessary for regulation by the untranslated RNA DsrA" <i>J. Bacteriol.</i> 183: 1997-2005.
	37.	Tsui, H.-C.T. et al. 1997 "Negative regulation of <i>mutS</i> and <i>mutH</i> repair gene expression by the Hfq and RpoS global regulators of <i>Escherichia coli</i> K-12" <i>J. Bacteriol.</i> 179: 7476-7487.
	38.	Tyc, K. et al. 1989 "U3, U8 and U13 comprise a new class of mammalian snRNPs localized in the cell nucleolus" <i>EMBO J.</i> 8: 3113-3119.
	39.	Urbanowski, M.L. et al. 2000 "The <i>gcvB</i> gene encodes a small untranslated RNA involved in expression of the dipeptide and oligopeptide transport systems in <i>Escherichia coli</i> " <i>Mol. Microbiol.</i> 37: 856-868.
	40.	Vytvytska, O. et al. 1998 "Host Factor I, Hfq, binds to <i>Escherichia coli ompA</i> mRNA in a growth-rate dependent fashion and regulates its stability" <i>PNAS USA</i> 95: 14118-14123.
	41.	Vytvytska, O. et al. 2000 "Hfq (HF1) stimulates <i>ompA</i> mRNA decay by interfering with ribosome binding" <i>Genes & Dev.</i> 14: 1109-1118.
	42.	Wassarman, K.M. et al. 1992 "The low abundance U11 and U12 snRNAs interact to form a two snRNP complex" <i>Mol. Cell. Biol.</i> 12: 1276-1285.
	43.	Wassarman, K.M. et al. 1999 "Small RNAs in <i>Escherichia coli</i> " <i>Trends Microbiol.</i> 7: 37-45.
	44.	Wassarman, K.M. et al., G. 2000 "6S RNA regulates <i>E. coli</i> RNA polymerase activity" <i>Cell</i> 101: 613-623.
	45.	Wassarman K.M. et al. 2001 "Identification of novel small RNAs using comparative genomics and microarrays" <i>Genes Dev.</i> 15(13):1637-51.
	46.	Zhang, A. et al. 1998 "The oxyS regulatory RNA represses <i>rpoS</i> translation by binding Hfq (HF-1) protein" <i>EMBO J.</i> 17: 6061-6068.
	47.	Zhou, Y.-N. & Gottesman, S. 1998 "Regulation of proteolysis of the stationary-phase sigma factor RpoS" <i>J. Bacteriol.</i> 180: 1154-1158.

O:\DOCS\MXG\MXG-4564.DOC
020404

EXAMINER	DATE CONSIDERED
*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.	